Norton Commando Vernier Isolastic

Installation & Adjustment Workshop Reference — 750 / 850 Commando

Order the right front kit first. Pre-1975 (pre-Mk3) front engine mount tubes have **unequal-length sides**; Mk3 tubes are **equal**. 066130A kit pre-Mk3 kit needs no machining of an unmodified front mount. If your front mount has already been machined to equal sides, use the Mk3 kit **067116A**instead. When unsure, measure both sides or call the supplier. This pre-Mk3 vs Mk3 mix-up is the most common ordering mistake.

Part Numbers — Classic Bike Spares Numbers

See Below Table for Classic Bike Spares,

Item	Part No.	Fitment
Front vernier kit — Mk3 only	067116A	1975-on (equal-length mount)
Front vernier kit — Pre-Mk3	066130A	1968–1974, unmodified mount (~£69.95 ex VAT)
Rear vernier kit	*067117A*	All 750 / 850 Commandos
Isolastic assembly tool	**06.3971**	All
Tool for vernier Isolastic adjustment	**06.6532**	All vernier
Hex key for vernier Isolastic adjustment	**13.1748**	All vernier

Installation — Front Isolastic (Vernier Conversion)

Applies to both Norvil/AN and RGM front kits — the principle is identical.

1. Support the bike securely on the centre stand and wire/strap it so it cannot collapse. Remove the petrol tank for access.
2. Remove the front engine mount through-bolt. Note which way it withdraws first — the timing case can block the bolt on one side.
3. Withdraw the old shim-type assembly (abutment, shims, rubber).
4. Fit the new front rubber into the mount tube (the tricky step). Clean and smooth the inside of the tube, apply a little Vaseline / rubber grease, then pull the rubber in with a long bolt or press it in with a wide vice or flypress, feeding the edges in under pressure. The fitting tool (06.3971 / 063971) makes this much easier.
5. Fit the abutment (fixed/locked side), then the adjuster (vernier) side. The left side is locked by the grub screw; the right-hand adjuster does the setting.
6. Fit end caps, PTFE washers and gaiters, then refit the through-bolt.
7. Set clearance (**see Adjustment Section Below**), then torque the through-bolt and re-check.

QC check on arrival: some pre-fitted vernier mounts have had the through-bolt fitting loosely in the centre tube. Confirm the mounting bolt is a snug sliding fit through the centre of the isolastic. A sloppy

fit is not acceptable — correct it (press-in bush) or return the part.

Installation — Rear Isolastic (Vernier Conversion)

The rear is simpler to adjust but harder to access. **Conventional route:** with the long bonded isolastic rubber, the primary drive comes off, inner chaincase off, gearbox out (release the cradle from the back of the engine to unmask the slot in the RH cradle plate so the gearbox can be removed); cradle and swinging arm come out together — about an hour's work with the right kit.

There is also a documented **no-drivetrain-removal** method some owners use: remove tank, exhaust, air filters and (optionally) primary and horn, secure the centre stand, and lower the cradle — fiddly and not guaranteed on every bike. Once the new rear vernier unit is in, adjustment is straightforward: there's a clear gap on the adjuster side for a feeler gauge.

Adjustment — All Vernier Types

Target clearance: 0.010″ is the "ideal clearance" in the pre-Mk3 factory manual — a good starting point, though many owners run tighter. RGM's own notes suggest a tighter figure: ~1.5 holes or 0.006″. The centre iso tube should move by that clearance between the two side caps.

Procedure

1. Loosen the locking grub screw on the adjuster collar.
2. Rotate the vernier collar in or out. The holes/serrations give fine, repeatable steps — each "hole" is a small fraction of a thread pitch.
3. Re-engage the grub screw into the serration so the collar cannot rotate.
4. Verify with a feeler gauge — the step most people get wrong.

The single most important caveat: vernier threads have slack, so **measure with the through-bolt torqued**. When you adjust you need through-bolt slack; when you tighten, your clearance can vanish. Check clearance with feeler gauges **with the through-bolt tight**, see what you have, then re-adjust.

Measuring details

- Measure between the PTFE washer and the end cap.
- Torque the through-bolt to spec before measuring — owners commonly cite ~25 ft·lb.
- Check with the bike on its wheels, as near level as possible (prop stand blocked up, packing under the right footrest) — not hanging on the centre stand, which misleads.
- On the front, the locked side has no measurable gap — measure on the adjuster (right-hand) side only.

If you can't dial out vibration

Don't just keep backing the gap out. Persistent vibration that won't tune out is most often the **rubbers, not the clearance**. Vibration with correctly set isolastics is more often than not caused by "pirate" rubber elements made to the wrong specification, Check Exhaust Rubber Mounts on bike and Head Steady Rubbers.

Practical Notes

The "vernier" adjusters aren't true verniers — they're just a finer, indexed thread adjustment — so a feeler gauge stays essential regardless of hole-counting. Opinions vary on supplier choice, so verify the through-bolt is a snug sliding fit on arrival.